

# TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104  
Phone No. (512) 322-2212 Fax No. (512) 463-6693

---

## PRODUCT EVALUATION

RC-404

Effective May 1, 2014

*The following product has been evaluated to withstand the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **May 2018**.*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

**Inspire Arcella Shake and Aledora Slate Synthetic Roofing Tiles Installed Over Board Decking,**  
manufactured by

**Inspire Roofing Products**  
**4057 S. Oak Street**  
**Metamora, Michigan 48455**  
**Telephone: (800) 971-4148**  
**www.tapcoint.com**

are acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

## PRODUCT DESCRIPTION

The Inspire Arcella Shake and the Inspire Aledora Slate are injection molded polypropylene synthetic cedar shake and slate roofing tiles.

The Arcella Shake roofing tiles are manufactured in lengths of 24.00 inches and widths of 5 inches, 7.5 inches, and 10.0 inches. The shakes are 0.62 inches at the thicker end and taper down to 0.10 inches. Refer to Figures 1, 2, and 3.

The Aledora Slate roofing tiles are manufactured in an 18.00 inch length and a width of x 12.00 inches. The slates are 0.50 inches at the thick end and taper down to 0.15 inches. Refer to Figure 4.

The roofing tiles shall be secured to board decking. The board decking may be solidly applied or may be applied as spaced boards.

## LIMITATIONS

**Design Wind Pressures:** Design wind pressure limitations are specified in Table 1.

**Table 1**

Product	Design Pressure Rating (psf)
Arcella Shake	-97.50
Aledora Slate	-97.50

**Roof Deck:** The roof deck shall be nominal 1x6 Southern Yellow Pine lumber. The boards may be installed solidly (not spaced) or as spaced boards. If the boards are spaced, then the maximum on center spacing of the boards shall be as specified in Table 2:

**Table 2**

Product	Maximum Board Spacing
Arcella Shake	10.25"
Aledora Slate	8.00"

**Roof Framing:** Minimum Southern Yellow Pine rafters or trusses.

**Roof Deck Attachment:** The boards shall be attached to the wood roof framing members with two minimum 10d (0.148") x 3" long ring shank nails at each intersection of a roof framing member. The fasteners shall be long enough to penetrate a minimum of 1.50 inches into the roof framing.

**Installation Over an Existing Roof Covering:** The slate and shakes shall not be installed over an existing roof covering.

**Roof Slope:** The synthetic roofing tiles are for applications to roof decks with a minimum roof slope of 3:12.

**Exposure:** The Arcella Shakes shall have a maximum exposure of 9.25 inches for roof slopes of less than 5:12 and a maximum exposure of 10.25 inches for roof slopes greater than 5:12. The Aledora Slates shall have a maximum exposure of 7.00 inches for roof slopes of less than 5:12 and a maximum exposure of 8.00 inches for roof slopes greater than 5:12.

## **INSTALLATION INSTRUCTIONS**

**Roof Deck:** Minimum nominal 1x6 Southern Yellow Pine board lumber.

**Underlayment (Solid roof decks only):** Minimum of one layer of No. 30 (Type II) asphalt felt shall be used. The underlayment used shall comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed with minimum 3 inch side laps and 6 inch end laps. The underlayment shall be applied with corrosion resistant fasteners. The fasteners shall be spaced a maximum of 36 inches on center along the overlap.

**Alternative Underlayment (Solid roof decks only):** A synthetic underlayment that complies with the requirements for underlayment as specified in the IRC and the IBC may be used. The synthetic underlayment shall be installed per the manufacturer's installation instructions.

**Metal Drip Edge and Flashing:** A metal drip edge shall be installed on the bottom edge of the roof (eaves) and on the open gable ends to deflect and prevent any wind driven rain from penetrating under

the synthetic roofing tiles. Similarly, the installation of flashing is required in valleys, along side walls of dormers, around chimneys and pipes, and around any other protruding structure that may hold ice and snow, or could allow water to penetrate.

**Installation:** The synthetic roofing tiles shall be installed as specified in the manufacturer's installation instructions and this evaluation report. Attach each synthetic roofing tile to the board decking with minimum 10 gauge x 1-1/2" long ring shank roofing nails. Two fasteners are required per synthetic roofing tile. The fasteners shall be placed at the locations indicated on the synthetic roofing tiles. Ensure that the head of the fastener is flush with the synthetic roofing tile surface. A starter course shall be installed as specified in the installation manual. Subsequent courses of synthetic roofing tiles shall be installed as specified in the installation manual.

**Note:** The manufacturer's installation instructions shall be available on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC); the International Building Code (IBC); and the Texas Revisions.

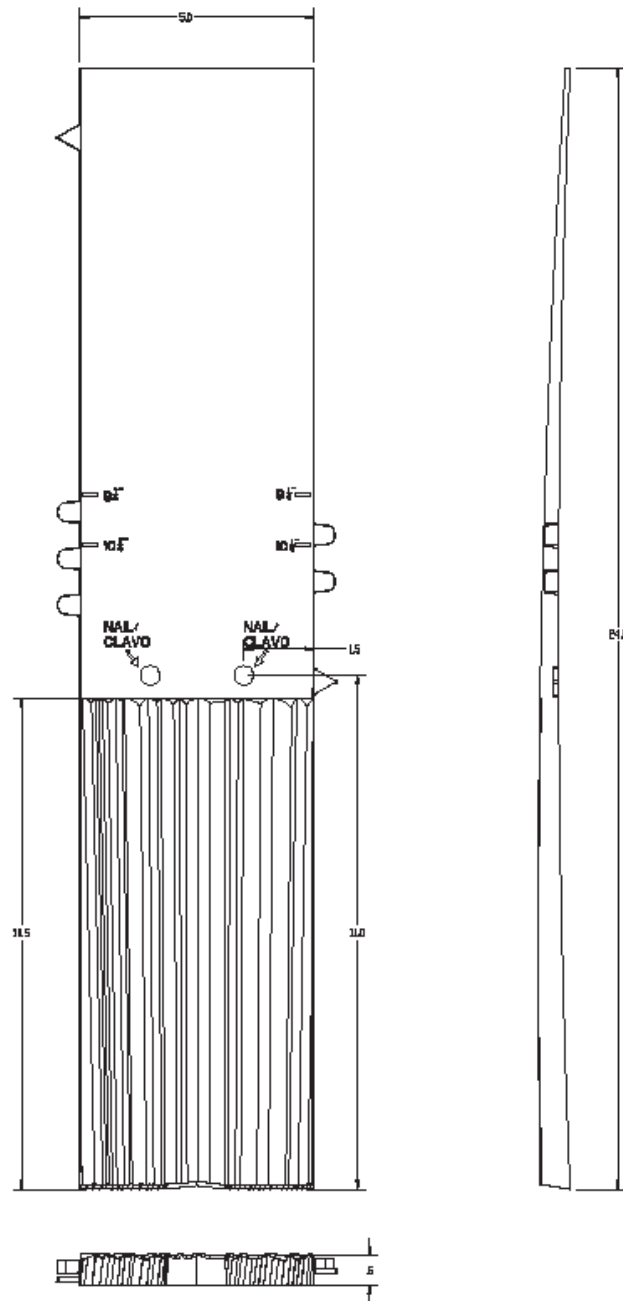


Figure 1. Inspire Arcella Shake (5" wide)

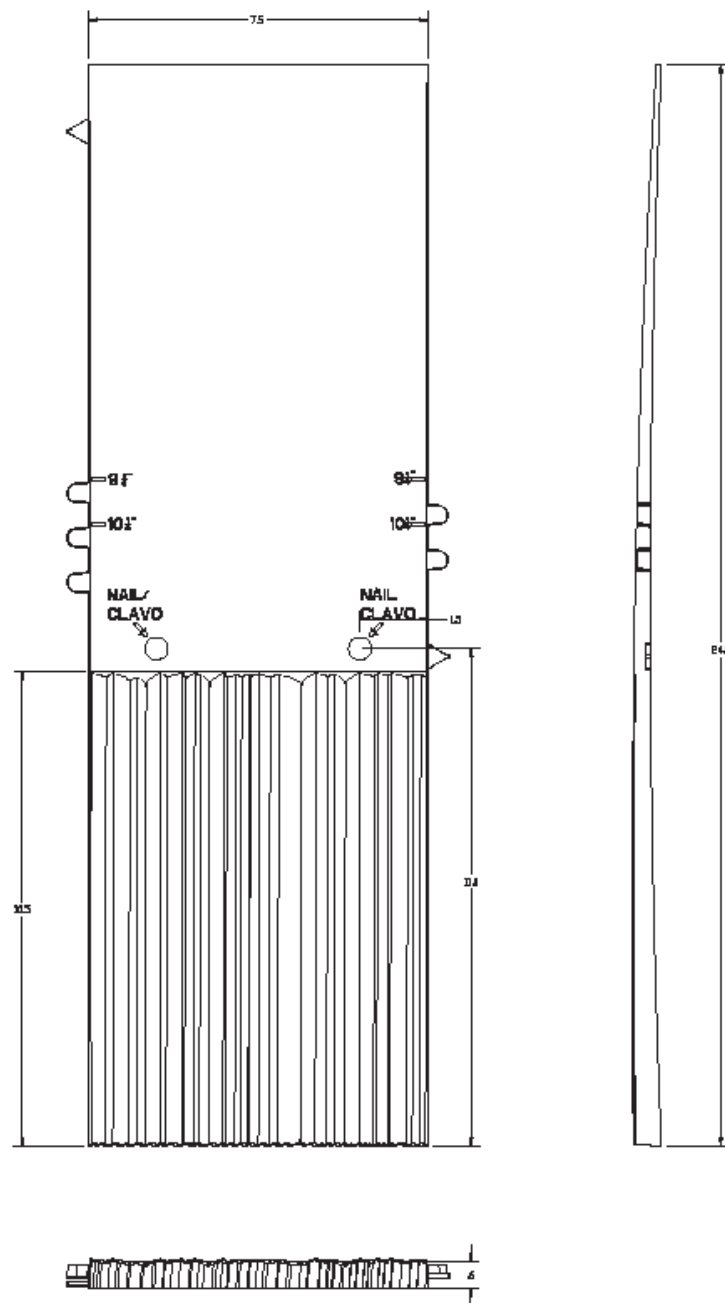


Figure 2. Inspire Arcella Shake (7.5" wide)

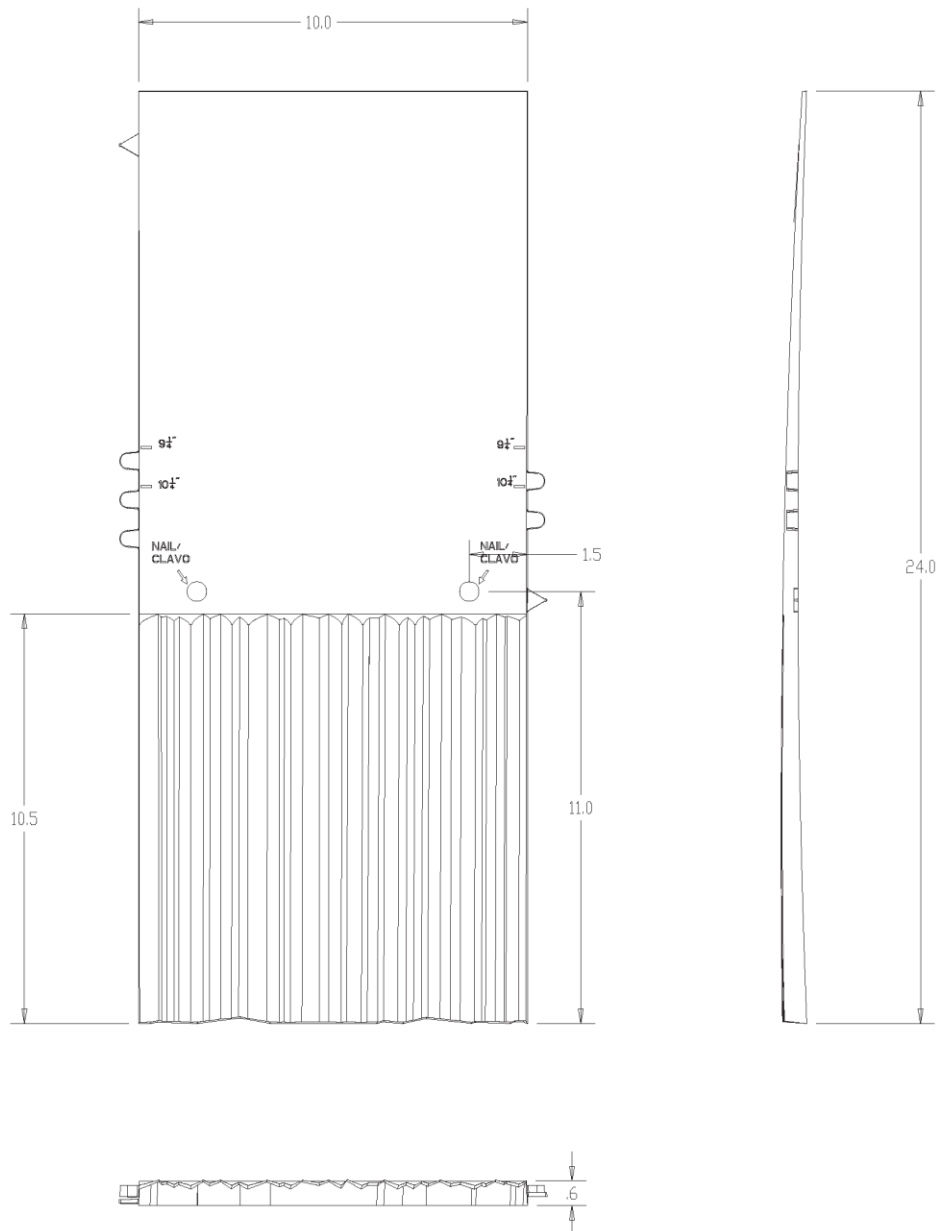


Figure 3. Inspire Arcella Shake (10" wide)

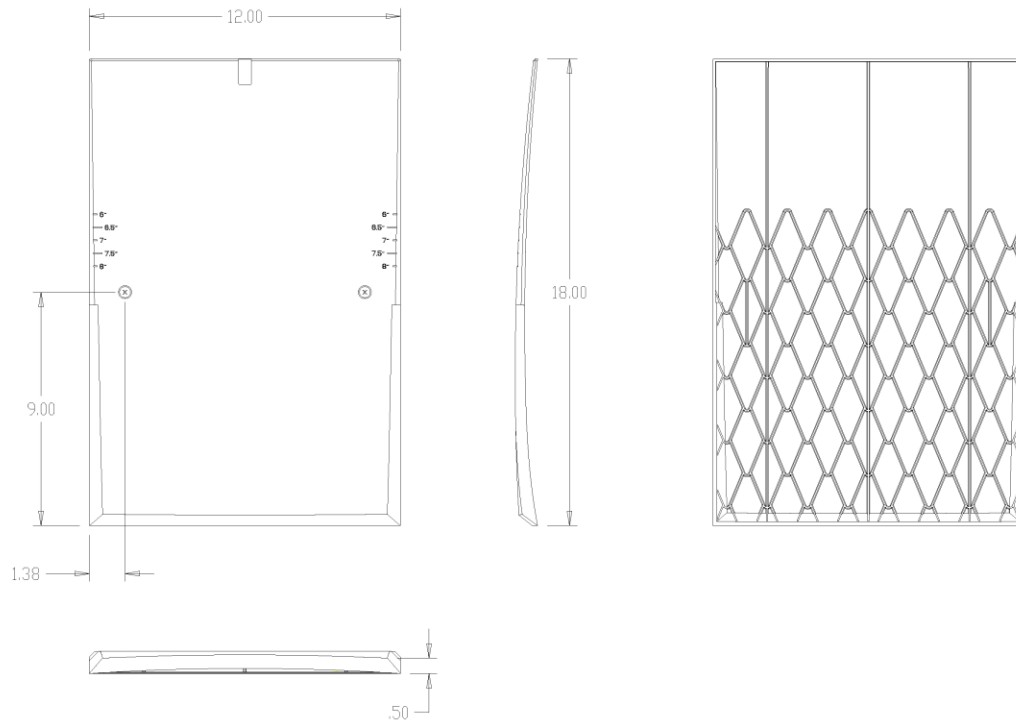


Figure 4. Aledora Slate